

State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
February 8, 2012

- ITEM: 6
- SUBJECT: Master Reclamation Permit Revision: Carlsbad Municipal Water District, Carlsbad Water Recycling Facility, Modifications to Order No. 2001-352 (Tentative Order No. R9-2012-0027) (Fisayo Osibodu).
- PURPOSE: To consider adopting tentative Order No. R9-2012-0027 which will modify Order No. 2001-352, *Master Reclamation Permit for the Production and Purveyance of Recycled Water, For Carlsbad Municipal Water District, Carlsbad Water Recycling Facility, San Diego County.*
- RECOMMENDATION: Adoption of Tentative Order No. R9-2012-0027 is recommended.
- KEY ISSUES: Modifying the discharge specifications for iron and manganese will prevent further violations of Order No. 2001-352 and will not unreasonably affect groundwater quality. The alternative to modifying the discharge specifications would be for Carlsbad Municipal Water District (Carlsbad MWD) to limit recycled water distribution and/or provide supplemental treatment to remove iron and manganese at significant cost.
- DISCUSSION: Order No. 2001-352 prescribes requirements for Carlsbad MWD for the discharge of up to 4.0 million gallons per day of tertiary treated recycled water from the Carlsbad Water Recycling Facility (Carlsbad WRF). The Carlsbad MWD also distributes recycled water from the Vallecitos Water District Meadowlark Water Reclamation Plant (WRP) and the Leucadia Wastewater District Gafner WRF within its service area. The location of the Carlsbad MWD service area is shown on Supporting Document No. 3.
- The tentative Order eliminates the 30-day average and daily discharge specifications for iron and manganese in Order No. 2001-352, and specifies only annual average discharge specifications for iron and manganese. Revision of the

discharge specifications for iron and manganese will prevent future violations of Order No. 2001-352, and will not unreasonably affect groundwater quality because:

1. Average concentrations of iron and manganese applied at Carlsbad MWD recycled water use sites are projected to be consistent with existing Basin Plan groundwater quality objectives for iron and manganese, and will not result in discernible impacts to groundwater quality or beneficial uses of groundwater.

The average concentration of iron in effluent from the Carlsbad WRF is below the groundwater quality objective of 0.3 milligrams per liter (mg/L). The average concentration of manganese in effluent from the Carlsbad WRF exceeds the groundwater water quality objective of 0.05 mg/L, however, the average concentration of manganese in recycled water applied to reuse sites is reduced to 0.04 mg/L due to precipitation influences and recycled water blended in from the Garner WRF and Meadowlark WRP.

2. Iron and manganese are nutrients required for plant growth. Nutrient demands of vegetation can exceed quantities of iron and manganese in recycled water. Therefore, uptake of these nutrients by vegetation irrigated with recycled water will reduce the potential for these nutrients to affect groundwater quality or impact beneficial uses.

Furthermore, if the discharge specifications for iron and manganese are not revised, Carlsbad MWD would have to limit recycled water distribution and blend imported water supplies into its recycled water system or provide supplemental treatment to remove iron and manganese at the Carlsbad WRF (at significant cost) in order to comply with current discharge specifications in Order No. 2001-352. This approach conflicts with the goals of the Statewide Recycled Water Policy to increase the use of recycled water.

The tentative Order eliminates daily maximum and 30-day average discharge specifications for iron and manganese, and also changes annual average discharge specifications for all constituents in Order No. 2001-352 from a running average to a calendar average. These changes are appropriate because short term fluctuations in quality of

recycled water are not expected to affect groundwater quality. Long term changes in the quality of recharge water are required before groundwater quality is affected.

For reference, a complete copy of Order No. 2001-352 as amended by the tentative Order showing all proposed changes in underline/strikeout format is included as Supporting Document No. 4. To date no comments have been received on the tentative Order.

LEGAL CONCERNS:

None.

SUPPORTING DOCUMENTS:

1. Notification Letter
2. Tentative Order No. R9-2012-0027
3. Map Showing Carlsbad Municipal Water District Service Area
4. Order No. 2001-352 as amended by Order No. R9-2012-0027 showing all proposed changes in underline/strikeout text

SIGNIFICANT CHANGES:

1. The tentative Order eliminates the 30-day average and daily discharge specifications for iron and manganese specified in Order No. 2001-352. In addition, the tentative Order increases the annual average discharge specification for manganese from 0.05 to 0.1 milligrams per liter.
2. The tentative Order changes annual average discharge specifications for all constituents in Order No. 2001-352 from a running average to a calendar average.

COMPLIANCE RECORD:

Fifteen violations of iron and manganese discharge specifications were noted in monitoring reports submitted by Carlsbad MWD in the past two years. The concentrations causing these violations would not exceed the revised discharge specifications.

PUBLIC NOTICE:

Notification of this action was sent to known interested parties by mail on November 29, 2011 (Supporting Document No. 1). Tentative Order No. R9-2012-0027 (tentative Order) (Supporting Document No. 2) was also posted on the San Diego Water Board website on the same day. These actions satisfy the public notification requirements of California Water Code, Division 7, section 13167.5 for a 30 day notice.

The tentative Order was initially made available in 2011 and has been assigned a new 2012 Order number to reflect that the tentative Order is being considered for adoption in 2012

Supporting Document No.1 Notification Letter

Supporting Document No. 2
Tentative Order No. R9-2012-0027

Supporting Document No. 3
Map Showing Carlsbad Municipal Water
District Service Area

Supporting Document No.4
Order No. 2001-352 as Amended by
Order No. R9-2012-0027